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Amendments to the Claims

Claim 1. (previously amended)   A method of enhancing an image, comprising:

first, smoothing the image using a sharply peaked filter to produce a smoothed image;

detecting an edge in the smoothed image;

performing lowpass filtering on the smoothed image to produce an enhanced image, wherein lowpass filtering is performed using a high frequency cutoff filter only on non-edge areas of the smoothed image as determined by the edge detection; and

performing median filtering to the enhanced image only on non-edge areas of the enhanced image as determined by the edge detection.

Claim 2. (original)   The method of claim 1, wherein smoothing comprises:

applying a two-dimensional filter to a pixel in the image;

storing a pixel processed by the two-dimensional filter in the smoothed image; and

repeating storing and applying for one or more other pixels in the image.

Claim 3. (original)   The method of claim 1, wherein performing lowpass filtering comprises:

applying a one-dimensional filter to a pixel in the smoothed image;

storing a pixel processed by the one-dimensional filter in the enhanced image; and

repeating storing and applying for one or more other pixels in the smoothed image.

Claim 4. (canceled)

Claim 5. (canceled)

Claim 6. (previously amended)   The method of claim 1, wherein detecting the edge comprises applying an edge filter to the smoothed image.

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Claim 7. (previously amended)   A method of enhancing an image, comprising:
smoothing the image using a sharply peaked filter to produce a smoothed image;
detecting an edge in the smoothed image;

performing lowpass filtering using a high frequency cutoff filter on the smoothed image
to produce an enhanced image; and

applying a median filter to the enhanced image, wherein the median filter is designed to
reduce artifacts on the enhanced image only on non-edge areas of the enhanced image as
determined by the edge detection.

Claim 8. (canceled)

Claims 9-10. (canceled)

Claim 11. (previously amended)   An article comprising a machine-readable medium
that stores machine-executable instructions for enhancing an image, the instructions causing a
machine to:

first, smooth the image using a sharply peaked filter to produce a smoothed image;
detect edge areas in the smoothed image;

perform lowpass filtering using a high frequency cutoff filter on the smoothed image to
produce an enhanced image, wherein lowpass filtering is performed only on non-edge areas of
the smoothed image as determined by the edge detection; and

perform median filtering to the enhanced image only on non-edge areas of the enhanced
image as determined by the edge detection.

Claim 12. (original) The article of claim 11, wherein smoothing comprises:
applying a two-dimensional filter to a pixel in the image;
storing a pixel processed by the two-dimensional filter in the smoothed image; and
repeating storing and applying for one or more other pixels in the image.

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Claim 13. (original)   The article of claim 11, wherein performing lowpass filtering comprises:

applying a one-dimensional filter to a pixel in the smoothed image;

storing a pixel processed by the one-dimensional filter in the enhanced image; and

repeating storing and applying for one or more other pixels in the smoothed image.

Claim 14. (canceled)

Claim 15. (canceled)

Claim 16. (previously amended)   The article of claim 11, wherein detecting the edge comprises applying an edge filter to the smoothed image.

Claim 17. (previously amended)   An article comprising a machine-readable medium that stores machine-executable instructions for enhancing an image, the instructions causing a machine to:

first, smooth the image using a sharply peaked filter to produce a smoothed image;

detecting an edge in the smoothed image;

perform lowpass filtering using a high frequency cutoff filter on the smoothed image to produce an enhanced image; and

apply a median filter to the enhanced image, wherein the median filter is designed to reduce artifacts on the enhanced image only on non-edge areas of the enhanced image as determined by the edge detection.

Claim 18. (canceled)

Claims 19-20. (canceled)

Claim 21. (previously amended)   An apparatus for enhancing an image, comprising:

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a memory that stores executable instructions; and

a processor that executes the instructions to:

first, smooth the image using a sharply peaked filter to produce a smoothed image;

detect an edge in the smoothed image;

perform lowpass filtering using a high frequency cutoff filter on the smoothed image to produce an enhanced image, wherein lowpass filtering is performed only on non-edge areas of the smoothed image as determined by the edge detection; and

perform median filtering to the enhanced image only on non-edge areas of the enhanced image as determined by the edge detection.

Claim 22. (original)   The apparatus of claim 21, wherein smoothing comprises:

applying a two-dimensional filter to a pixel in the image;

storing a pixel processed by the two-dimensional filter in the smoothed image; and

repeating storing and applying for one or more other pixels in the image.

Claim 23. (original)   The apparatus of claim 21, wherein performing lowpass filtering comprises:

applying a one-dimensional filter to a pixel in the smoothed image;

storing a pixel processed by the one-dimensional filter in the enhanced image; and

repeating storing and applying for one or more other pixels in the smoothed image.

Claim 24. (canceled)

Claim 25. (canceled)

Claim 26. (previously amended)   The apparatus of claim 21, wherein detecting the edge comprises applying an edge filter to the smoothed image.

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Claim 27. (previously amended)

An apparatus for enhancing an image, comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

first, smooth the image using a sharply peaked filter to produce a smoothed image;

detect an edge in the smoothed image; and

perform lowpass filtering using a high frequency cutoff filter on the smoothed image to produce an enhanced image,

wherein the processor executes instructions to apply a median filter only on non-edge areas of the enhanced image as determined by the edge detection, and wherein the median filter is designed to reduce artifacts on the enhanced image.

Claim 28. (canceled)

Claims 29-30. (canceled)

Claim 31. (canceled)

Claim 32. (previously amended)   The method of claim 7, wherein detecting the edge comprises applying an edge filter to the smoothed image.

Claim 33. (canceled)

Claim 34. (previously amended)   The apparatus of claim 27, wherein lowpass filtering is performed only on non-edge areas of the smoothed image, and wherein detecting the edge comprises applying an edge filter to the smoothed image.

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Claim 35. (previously presented)   The method as recited in claim 1, wherein the method of enhancing an image is performed in one pass.

Claim 36. (previously presented)   The method as recited in claim 6, wherein detecting an edge further comprises comparing a predetermined threshold with results of edge filtering, and wherein edge values determined by the edge filtering that exceed the threshold are ignored during lowpass filtering.

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